

Inside & Out

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COMPAQ NEWS

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Company to take leading role in water conservation

(This is the first in a series of articles on how Compaq is working to help preserve our environment.)

Because the depletion of the earth's supply of clean groundwater is a growing environmental concern, Compaq is planning to implement a major water conservation system.

This system — which will allow the company to reduce well water use by 50 percent and will recycle storm and sewer water — will be used on Compaq Center East (the Marshall Tract) in Houston.

Water management

"We're going to manage the water. Instead of doing just the convenient thing, we want to do the right thing," says Michael Jackson, Manager, Material Resources.

The Compaq main campus now uses approximately 100 million gallons of water a year — for cooling, drinking, manufacturing processes, irrigation, etc. This water is being pumped from an underground well and Jackson says this supply will not last forever.

"In about 10 to 15 years, the groundwater in Harris County (where the main campus is located) will be depleted."

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Ron Perkins, Manager, Facilities Systems Development, stands in one of the company's cooling towers on the Houston main campus. The cooling towers are used to cool water used in air conditioning systems. According to plans for a new wastewater treatment system, surface and recycled water will be used in cooling towers on Compaq Center East.

NEW YORK, NEW YORK



Compaq employees working in the Northeastern Region moved to new offices early this year. The offices are located in the European American Bank Plaza, Box 140, Uniondale, N.Y. 11556-0140. The mail code is 861100.

Compaq opens Austrian subsidiary

On Feb. 23, Compaq announced the opening of its wholly owned subsidiary in Austria, Compaq Computer GesmbH. Prior to the subsidiary's opening in Vienna, Austrian Authorized Dealers were supported by Schwaighofer Computer GesmbH & Co. KG, Vienna, which in turn was supported by Compaq Computer GmbH in Munich, West Germany.

Eckhard Pfeiffer, President of Compaq Europe and International operations, said, "The opening of this new Compaq subsidiary represents a response to the increasing demand for our products in Austria. We found that Austria is a strong growth market for our high-performance desktop, portable and laptop personal computers."

According to the market research firm Dataquest Europe, more than 80,000 business PCs are expected to be sold in Austria in 1990.

"The establishment of our Austrian subsidiary ensures that Compaq will meet the growing needs of end-users, as well as the needs of our high-quality dealer network," Pfeiffer continued. "Compaq Computer GesmbH is our 15th wholly owned international subsidiary. In addition to marketing the complete range of

Compaq products, the subsidiary will provide full-service and technical support to the growing number of Authorized Dealers in Austria."

Franz Janda was appointed Managing Director of Compaq Computer GesmbH. An Austrian citizen, Janda has more than 20 years of experience in data processing. Prior to joining the Compaq team, Janda was employed by Nixdorf Computer GmbH as Managing Director of Sales.

At a recent meeting of Authorized Dealers, major accounts and journalists, Compaq President and Chief Executive Officer Rod Canion noted, "The increased presence of Compaq in Austria is part of the company's continuing international expansion program."

In 1989, Compaq sales in Europe and elsewhere internationally contributed 46 percent of the company's revenue. International sales revenue grew 62 percent in 1989 as compared to 1988, and exceeded \$1 billion for the first time.

Compaq Computer GesmbH joins other wholly owned international subsidiaries in Australia, Belgium, Canada, Denmark, West Germany, France, Great Britain, Italy, The Netherlands, Norway, Singapore, Spain, Sweden and Switzerland.

Company to take leading role in water conservation

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he explains. "Experts say it takes 3,000 years for a drop of rain water to become clean, fresh groundwater in our area."

Currently, the main campus' supply of water is pumped from the ground, used once, treated, then discharged into Cypress Creek, which flows into Lake Houston. Many Houston-area residents use treated water from Lake Houston as drinking water.

"It really doesn't make sense to throw all the water away, especially after we've spent so much money to clean it up," Jackson says.

New initiatives

The alternative, he explains, is to use as much surface water — from rainfall, lakes, etc. — and recycled treated water as possible for uses such as irrigating the landscape in dry summer months. To re-use water, it must go through a few extra steps of treatment, but Jackson says the extra cost is small compared to the environmental savings.

Surface and recycled water will be used for irrigation and in cooling towers, which cool the water used in the air conditioning systems. Employees' drinking water will still be pumped from the well.

"We'll always have to pump some water, but this will drastically reduce our dependence on it," Jackson says.

Taking steps

Compaq is planning to build detention ponds on CCE to trap rainwater for use in irrigation. This, however, is only a small part of the plan.

An entirely new wastewater treatment system is planned for the site. It starts with an energy-efficient "conventional" sewage treatment plant which will remove 90 to 95 percent of the pollutants. This is the normal treatment process used by most cities and industries before wastewater is discharged.

Compaq will take extra, more advanced steps to remove 99 percent of pollutants. One step is a "rock marsh" — through which water will flow —



Compaq employee Wayne Zandon tests the cooling tower water on the main campus in Houston.

where plants and microorganisms remove pollutants naturally.

After treatment, the recycled water will be pumped into the cooling towers and onto the ground for irrigation.

According to Jackson, this is "leading edge" technology and is very cost-effective.

"Not only will this reduce depletion of groundwater, but it makes sense," he says. "I can't see throwing away this resource."

Efficient irrigation

Another water-saving measure Compaq has planned is efficient irrigation.

Sprinkler systems which run on timers are often turned on while it's raining. Since this wastes water, the company will implement a new system. It will run on a COMPAQ computer and will measure the condition of the ground and air with sensors. That way, the system

will not turn on unless plants actually need water.

Not only that, the system will know how much water the lawn needs each time it is watered to maintain proper wetness.

"We'll save over 50 percent of water now used for irrigation," Jackson says. "All these conservation measures are so important because in the near future, clean water will become very precious."

Environmental tips

The following is a list of tips from the book, "The Greenhouse Crisis: 101 Ways to Save the Earth" for use at home to help conserve our environmental resources.

1) Buy energy-efficient appliances.

When you're shopping for appliances such as freezers, dishwashers, washing machines and dryers, compare the Energy Guide labels on various models to determine their energy efficiency.

2) **Insulate your home.** Inadequate insulation is a leading cause of energy waste in most American homes. An estimated 20 to 30 percent of heating and cooling system load could be reduced with adequate insulation.

3) **Reduce lighting.** Replace existing bulbs with lesser-wattage bulbs and remove one bulb from multi-bulb fixtures. Remember to replace bulb with a non-working bulb for safety.

4) **Use small electric pans or ovens for small meals.** Using the oven or kitchen range for small meals wastes energy. For larger meals, opt for range-top preparation instead of the oven when you have a choice.

5) **Presoak very dirty laundry.** This helps prevent wasting water by having to wash items twice.

6) **Install a flow control device in the showerhead.** This do-it-yourself device limits the flow of water in your shower, which translates into energy and money savings.

7) **Contact local officials and urge them to begin roadside pick-up of separated recyclable waste and household toxic materials.** If a pick-up service is not available, pressure local officials to establish one. The easier it is for people to recycle, the greater the participation. Hazardous products including paints and solvents, furniture polishes, pesticides and oven cleaners must be separated from other wastes, because they can cause serious pollution problems if they aren't disposed of safely and responsibly.

8) **Properly maintain your vehicle; get it tuned up every 5,000 to 10,000 miles.** Vehicles that are properly maintained get better mileage than those that aren't. According to the Environmental Protection Agency, the

average car experiences a 5 to 8 percent fuel economy improvement after a tune-up.

9) **Buy and use products that will last.** Choose products with a long life expectancy. Cloth diapers, razors with replaceable blades and glass or ceramic mugs are examples of durable products. Remember, if it's disposable and convenient, it probably contributes to the greenhouse effect.

10) **Turn off the water in your sinks, baths and showers when you're not using them.** It's been shown that up to 50 percent of the water wasted in the home can be attributed to taps that run unnecessarily. Paying attention to faucet use can significantly save water.

Artificial Intelligence committee formed

When many people think of Artificial Intelligence (AI), they envision futuristic robots or rooms filled with huge computer systems. Actually, AI is currently being used in many fields and in many ways — including here at Compaq.

The popular definition of AI research is “designing computers that think as human experts do.” Computers that understand design rules, for example, will serve as electronic apprentices by taking over the simpler design tasks.

Because AI is a new technology and research is slow, a Compaq team has been formed to determine how AI may further fit within the company.

AI in Compaq

AI is used in Manufacturing, Product Engineering and Human Resources. It performs tasks such as training, diagnosis and repair of board level products and problem-solving.

The AI Committee — made up of representatives from Manufacturing, Customer Service, Information Management and CAE — is soliciting new members from all departments, including international subsidiaries.

“We want to share ideas,” says Vijay Parikh, CAE. “Our goal is not to impede any present development taking place, but rather to look at several key areas where we think AI might fit within Compaq.”

He adds that AI has potential use in any department.

The drop in computer costs is the driving force behind the increased interest in AI, Parikh says. Ten years ago, AI

would only run on highly specialized hardware costing many thousands of dollars, he explains. Now, it can run on PCs, which cost much less.

Expert systems

The form of AI utilized by Compaq is an expert system (ES). It is a computer application that solves complicated problems that would otherwise require extensive human expertise. An ES simulates the human reasoning process by applying specific knowledge and inferences.

One intriguing and powerful characteristic of ESs — and that which distinguishes them from more traditional

The form of AI utilized by Compaq is an expert system (ES). It is a computer application that solves complicated problems that would otherwise require extensive human expertise.

computer applications — is their ability to deal with challenging real-world problems by using processes reflecting human judgment and intuition.

A newer, even more sophisticated, technique is called the object-oriented system.

The new ES shells — computer software — make it much easier for use by people with the necessary knowledge,

but no programming experience.

The Compaq AI team has a corporate licensing agreement with London-based Expertech Ltd. to use the ES shell Xi Plus. The team has chosen three object-oriented system shells to evaluate, Nexpert from Neuron Data, Egeria from Expertech Ltd. and Aion from Aion Corp.

“The purpose of this evaluation is to learn as much as possible about the object-oriented techniques which may ultimately contribute to the company’s success,” Parikh says.

The cost of ES and object-oriented system shells can range from \$600 to \$300,000 depending on the level of technology used.

Many applications

Many large ESs are being used in medicine. AI is also used in a wide variety of ways including diagnosis, planning, forecasting, design, interpretation, control, status monitoring and instruction. Applications include:

- NASA has an expert system that assesses risks of thunderstorms near the shuttle launch area.
- The FAA (Federal Aviation Administration) uses a flight simulator expert system to train student pilots.
- Campbell Soup Company handles 95 percent of all maintenance problems with its soup sterilizer by using an ES.
- Ford Motor Company has increased its manufacturing productivity 50 percent by using an expert system to diagnose engine problems.
- Corning Glass runs an expert system to develop a thermodynamic model of its

furnaces. This helps them figure how to set the controls.

- The FBI uses an expert system to help solve bank robberies, accidents, murders, etc.

The time is now

In the future, Parikh says, many Compaq departments will be utilizing AI.

“The time for AI is now rather than later. AI is so intriguing that it is not difficult to have people work harder to learn about it,” he says. “Although it is time-consuming to put human knowledge into an expert system, there could be a big payoff in the long-term future.”

Any Compaq employee interested in sharing this technology or making suggestions should contact Parikh at 374-9981 or Chuck Elliott at 374-2107.

New board member named

James W. Glanville has been appointed to the Compaq Board of Directors, bringing the number of board members to six. The announcement was made last month.

Glanville, 66, is General Partner at Lazard Freres & Co., a New York-based investment banking firm. From June 1986 to June 1989, he was Vice President for Business Affairs and Treasurer at Rice University in Houston. He also served as Visiting Professor of Investment Banking at The Jones School. He is Senior Advisor to the Sterling Group Inc., Houston.

“Jim’s business experience will be an invaluable asset to the company’s Board of Directors and we look forward to his contributions as we enter the 1990s,” said Rod Canion, Compaq CEO.

Glanville has extensive experience in the petroleum industry with Texaco and Humble Oil & Refining Company (now Exxon Company, U.S.A.) where he served in a variety of engineering positions. He is the author of numerous technical papers on hydrocarbon behavior, reservoir engineering and the economics of the petroleum industry.

The new board member graduated from Rice University with a bachelor’s degree in chemical engineering. He received a master’s and a professional degree in chemical engineering from the California Institute of Technology.

Other members of the Compaq Board of Directors include Benjamin M. Rosen, Chairman, Sevin Rosen Management Company and Chairman, Compaq Computer Corp.; Canion, President and CEO, Compaq; Robert T. Enloe III, President, Lomas & Nettleton Financial Corp.; Kenneth L. Lay, President and CEO, Enron Corp.; and George E.R. Kinnear II, Executive Vice President, University of New Hampshire.

Compaq products now available in Trinidad

In February, Compaq announced the availability of COMPAQ personal computers in Trinidad, a West Indies island located off the coast of Venezuela.

“Because of the increased demand for COMPAQ products in Latin America and the Caribbean, we saw

The presence of Compaq is part of a continuing international expansion...

the need to have fully trained Authorized COMPAQ Computer Dealers in these countries,” explained Tom Howard, Director of International Market Development for Compaq.

The presence of Compaq in these countries is part of a continuing international expansion program throughout Europe and Latin America. Last year, Compaq began sales operations in Latin America by authorizing dealers in Chile, Colombia and Venezuela.

Compaq sales in Europe top \$1 billion

The European business community’s continued acceptance of Compaq products propelled the company’s 1989 sales past the \$1 billion mark for the first time in that market.

According to Eckhard Pfeiffer, President, Europe and International, “We added another \$500 million to our international sales last year. This brought total international revenue outside North America to \$1.3 billion, with Europe contributing 93 percent, or \$1.2 billion.”

This significant increase in European sales spurred Compaq to the No. 2 market share position in the European business PC market, according to Paris-based market research firm Dataquest Europe. The research showed Compaq with a 9.5 percent estimated market share in value in 1989, a 2.4 percent increase from its 1988 share. This reflects an overall growth rate of 65 percent across European markets, compared to a general market growth rate of 35 percent.

“As markets become larger, we naturally expect growth rates to slow in Europe, but industry analysts forecast that good growth should continue in Europe through at least 1992, while U.S. market growth rates are expected to slow to around 10 percent,” said Pfeiffer. “The company’s European and other international sales could equal or surpass Compaq sales in the U.S.

market in the same time frame.”

Although Compaq entered the European market just six years ago, the company now operates 11 wholly owned European subsidiaries, doing business through more than 1,500 Authorized Dealers. The company’s Scottish plant, located in Erskine, Scotland, produced 49 percent of all COMPAQ personal computers shipped to international markets in 1989, a key factor in enabling Compaq to meet market demand for its products, according to Pfeiffer.

Pfeiffer said the company expects significant future opportunity in the market for PCs from Eastern Europe, which has a current installed base of between one and two million units, compared to approximately 50 million units installed in Western Europe. Further stimulus to the PC market in Western Europe is likely in 1992, when many European countries will unite to form a single economic market.

With the recently announced COMPAQ SYSTEMPRO breaking performance barriers in PC networking and multi-user systems, and with the new LTE laptops taking commanding European market share, Pfeiffer predicts that Compaq is in good position to continue its leadership in the business PC industry, and to take advantage of the market segments expected to have the highest growth rates.

Compaq inventors encouraged to consider patent protection

Patent disputes are becoming commonplace in the corporate world, and particularly in the field of high technology, where challenges over "proprietary" information erupt almost daily.

As an innovator in the rapidly changing field of personal computers, Compaq has accumulated a number of patents on its products and on technology used to develop them. And the company wants to make it easier for its inventors to tackle the patent application process.

"Patents have become important corporate assets," notes David Cabello, Managing Attorney, Intellectual Property, for Compaq. "Our inventors should know that they and their inventions are important to the company."

More than two dozen patents have been awarded to Compaq inventors, and the company presently has about 100 patent applications pending. To encourage even more patent applications, Cabello has instituted a training program to help engineers apply for patents, and Human Resources has begun a recognition program for Compaq inventors.

Patent activity has been building gradually. In 1982, only five or six patent applications were filed. In 1988, the number of applications grew to 45. Last year, about 80 patent applications were filed. Cabello expects about 125 in 1990.

"Patents are important to a company for several reasons," he explains. "They can protect technology that we have developed, and can give us a strong position in technology and patent negotiations with our competitors."

Patents can keep other companies from profiting from our employees' work. "When a product from a competitor closely resembles one of our design form factors, we can prohibit those companies from manufacturing and distributing those products, based on our design patents," Cabello explains.

Compaq patents have come from a variety of areas: from Manufacturing, the ASIC group, the Power Supply Group, the Hardware Group and the Software Group, to name a few.

The following are questions and answers designed to help employees who may have an invention worth patenting. For more information, contact any one of the company's patent attorneys: David Cabello, 374-2634; Chris Keirs, 374-7676; Mike Schroeder, 374-6830; or Irene Kosturakis at 374-5167.

Q. What is a patent?

A. A contract between an inventor and the government. The contract gives the inventor the right to keep others from making, using or selling the patented invention. Because a patented invention may contain ideas from someone else's patent, a patent does not necessarily give the inventor the right to utilize the invention. It simply reserves the inventor's right to keep other people from making, using or selling the patented invention.

Q. What is patentable?

A. Any hardware and much software is potentially patentable. Various software programs, circuit designs, computer system designs, communications protocols, any mechanical features of a computer system, storage techniques, etc. may be protected by patents, if the inventions are sufficiently unique. To be patented,

the device need not have been built or the program written — just sufficiently developed so that a clear description may be written of how it can be built or implemented.

Q. When should I file a patent application?

A. Timing is critical. If at all possible, you should file a patent application before there have been any public disclosures or uses of the invention. This will protect the company's rights to foreign applications of the patent. In the United States, patents may be filed within a one-year grace period from the first public use or offer of an invention.

Q. How do I know if my invention is patentable?

A. The test for patentability is usually stated as "Would the invention have been obvious to one of ordinary skill in the art at the time the invention was made, if that person knew the prior art reference?"

"Prior art" is any technology publicly available before the date of the invention. Prior art also includes works of others that were conceived before you conceived of your invention. For U.S. patents, prior art includes publication or public use of the invention before the invention was conceived, or more than one year before the patent application is filed. For patents in Europe and many other countries, prior art is any publication or invention that was in public use before the filing date of the U.S. patent application.

"Public use" includes a single use for profit. Application of a patentable process in a factory during the course of producing articles for commercial purposes is considered public use. If an invention relating to Compaq manufacturing or testing procedures is used in the factory for a year, it may not qualify for patent protection.

"Level of skill" varies with the type of invention. The level of skill required for a computer design, for example, would probably be a bachelor's degree in electrical engineering and a few years of design experience.

The test for patentability is legally complex and should be applied with the assistance of people experienced in the patent field.

Q. What is involved in a patent application?

A. A patent application must perform two functions. It must disclose the best mode of "practicing" or using the invention known by the inventor at the time the application is filed. And it must give enough disclosure to enable somebody skilled in the art to make the invention work.

Because patent attorneys, patent examiners, judges and juries are generally not "skilled in the art," the application should describe the invention in the simplest possible terms.

Q. Why does the Patent Office need so much background?

A. Under Patent Office rules and U.S. law, inventors and their attorneys are required to disclose all known prior information that could be material to the acceptance of the patent. Because it would be impossible for patent examiners to know all the information that led up to an invention, inventors have a



Ted Papajohn, designer of the first Compaq portable computer, was also one of the first employees to be granted a patent.

duty to disclose to the Patent Office all known "prior art" that would be considered important in patent evaluation.

Q. Why do I have to keep my old notebooks, drafts and drawings?

A. In the United States, patents are granted to the first person to invent, not the first person to file a patent application. If you were the first to invent a device and a patent had been granted to the second person to invent the device, that patent is invalid.

Notebooks, drawings and drafts are often the best available evidence of your conception of the invention and your diligence in developing it, especially if they have been dated and witnessed by coworkers. All important conceptions and ideas should be documented, read and understood by a fellow employee. That coworker should then sign and date your description.

Notebooks are especially important in patent applications. Because they are bound, pages can not be torn out or added without detection, so a clear chronological order is apparent. All writing in notebooks should be on consecutive pages and in ink.

By keeping old drafts and drawings of a project, true progression of the product's development can be seen.

Q. What about inventions involving product announcements?

A. You may have to review a draft patent application just a couple of days before the product is announced, shipped or publicly demonstrated.

Although this may make the patent application process more annoying by adding to your job demands at a critical time, the rights to patents in Europe and other foreign countries are at stake.

We want your news

Remember, we want your story ideas for *Inside & Out*, the employee newsletter. Just send suggestions and information to Inside-Out Suggestion @ Corp Rel@Mkt Hou on the Banyan electronic information and com-

munications network. By the way, the B-mail system thinks Suggestion is the last name of the address, so type "suggestion" to get the Popname listing. You can also reach us at mail code M070502 in Houston.

Users impressed with COMPAQ notebook PCs

Demand is high for the new COMPAQ laptops, the COMPAQ LTE and COMPAQ LTE/286, and those lucky enough to already have one are singing the PC's praises.

Following is a letter recently received by Compaq from an end user.

Dear Compaq,

Wedge into a sloping seat on my way across the Atlantic, I can't keep from admiring my equally compact COMPAQ PC. You seem to have captured everything in one fell swoop, from the necessities on every traveler's wish list to the aesthetics that go way beyond current computer design.

Who would have ever thought of an eggshell texture on the keys? And controls that are cleverly worked into

a radius? Even if it didn't work, I would want one to look at. Your manuals are tasteful, and they've kept my interest over the last 5,000 miles — in spite of the fact that I'm a techno-idiot.

This represents a big step up for me, leaving my Toshiba 1000 behind in the dark ages. Your screen is lucid, the disk drive screams at a frightening pace and everything makes sense, like your clever standby program.

I hope you make a fortune off this new COMPAQ LTE. You deserve it. There will be better, lighter, faster computers in the future. But for now, the playing field is all yours.

Jeremy S. Lezin
Santa Cruz, CA



Those lucky enough to already have a COMPAQ LTE/286 or COMPAQ LTE are already singing the PC's praises. The COMPAQ PORTABLE 286 still draws rave reviews.

Other COMPAQ PCs still draw rave reviews

While orders for the new and innovative COMPAQ LTE and LTE/286 are taking off, the COMPAQ 286 computer line is still bringing satisfaction to end users.

Following is a letter which was recently received from a customer.

Dear Compaq,

The reason for this letter is to tell you a story about your wonderful COMPAQ PORTABLE 286 computer. I have owned the computer since May 1989 and use it constantly, seven days a week.

On Dec. 21, I broke my leg in an accident. On Jan. 13, I started down the stairs in my home with the COMPAQ 286 tucked away in its protective travel bag. Being unsure of the step due to my bad

leg, I slipped and had no choice but to let go of the computer and grab the banister for fear of further injuring my leg.

The computer hit at least four times, turning in midair with sickening thuds, before landing upside down on the brick entryway. My heart sank. I retrieved the computer from the case. When I turned it on, to my amazement, I found it still in perfect working order. The only damage was the left wire way cap, which lost its locking tab.

A great testimonial to a great product!

Boyd Bumpus
Vice President, Commercial
Project Sales
The Genlyte Group

Product training demand soars

Authorized Dealers have quickly accepted the COMPAQ SYSTEMPRO, helping to create unprecedented demand for the company's sales and technical courses scheduled through April.

Demand for training on the new, high-performance personal computer system, as well as on the COMPAQ DESKPRO 486/25, is an early sign of positive reaction to the new products.

Although training began in Houston, courses are scheduled around

***"We have scheduled
191 classes and
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the world, including more than 60 U.S. and Canadian cities.

"We scheduled 125 technical classes, and almost all of them filled up immediately," says Coleman Sisson, Manager, Technical Training Programs. "This is the most extensive product training we've ever done. The response is a sign of dealers meeting the challenge."

"Dealer demand and interest in our roadshows (training courses) is the highest I've seen in more than four years," says Phil Hechler, Manager, Resident Sales Training. "We have scheduled 191 classes and enrolled more than 4,400 students."

***"We never questioned
whether we would
take this training.
Our only decision was
when our reps would
be trained."***

Through the first six weeks of training, we averaged 21.5 students per class."

Authorized Dealers were eager for the challenge before their first class.

"Many of our customers require powerful platforms," says Gene Lambert, sales manager of the Elmhurst, Ill., ComputerLand that sent 33 people to Houston when training began.



"We firmly believe in the direction Compaq has taken with the SYSTEMPRO. We eagerly anticipated the product. When we had the option to attend classes right away in Houston or wait until training came to us, we chose to go to Houston. We think a good start is important."

Christine Kuzyk, one of three sales managers for Hamilton Computers of Toronto, explains, "Our company is dedicated to this training. We see

COMPAQ SYSTEMPRO as strategically important in many of our opportunities. The product fits with what we're doing, and also fits the direction we see the marketplace going.

"We never questioned whether we would take this training. Our only

***"We couldn't afford
to send everybody
at the same time,
because we had to
keep some people
here..."***

decision was when our reps would be trained. We couldn't wait to participate in the courses."

Bill Barton, service manager for Inacomp Computer Center in Roswell, Ga., also decided early that all his people needed the training.



"We couldn't afford to send everybody at the same time, because we had to keep some people here," Barton recalls. "But we'll have all our people trained by the end of April."

"I see training on the COMPAQ SYSTEMPRO as both a necessity and an opportunity. The opportunity for us is a marketplace where we haven't been. We've been in networking for some time, but this product is a network server," Barton says.

"I think the product will benefit businesses that can't afford to be down for any length of time. That creates an opportunity for technicians. I think we will see a better breed of technician for this product, not just

***"I think the product
will benefit businesses
that can't afford to be
down for any length
of time."***

someone who can replace a few parts. I think we will see a new standard in service, with dealers who commit to SYSTEMPRO moving ahead of the competition."

Robert Davis, a service manager at Government Technology Services in Chantilly, Va., near Washington, observes, "We always like to support Compaq because Compaq does such a good job of training and supporting us. But this product is an incredible opportunity. I think it represents a move to a new area of the computer industry."

"There's no question COMPAQ SYSTEMPRO will be what technicians are working on in the years ahead."

Scotland expansion proceeding on schedule

Evidence of Compaq growth is everywhere — from the nearly completed CCA9 and 10 administration buildings in Houston to the construction of manufacturing and office space in Yishun, Singapore.

Spectacular growth is just as noticeable, however, at the construction site in Erskine, Scotland, where the \$40 million Phase III expansion of the company's manufacturing and administrative operations is moving along at a fast pace. Although design work on the facility began in March, 1989, and is only now being finished, a fast-track construction schedule has construction approximately 20 percent complete.

After seven months of construction, Compaq Scotland employees are looking forward to reaping at least some benefits of expansion this month, when they begin parking in the new garage (or "car park," as they call it).

Although construction of the car park is still under way, employees will be able to use about 2/3 of the structure in mid-March. These employees have been parking in a temporary lot across the road from their building, and boarding a bus each day to get to work. Although this was not exactly comfortable for Compaq Scotland employees during winter, the temporary inconvenience they experienced has enabled the garage

to be completed five months ahead of schedule.

When completed this summer, the five-level car park will accommodate 683 cars. Stairs in the garage will feature

electric heating to prevent ice build-up in winter months.

The new, convenient car park is just one of several elements involved in Phase III expansion. Construction of the

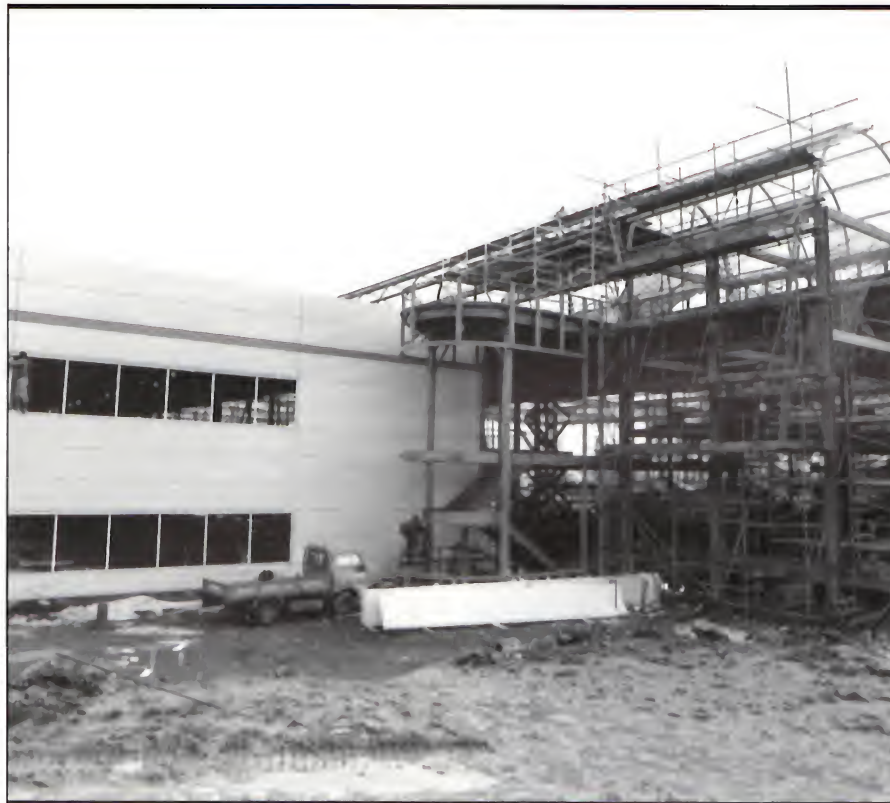
new 120,000-square-foot manufacturing facility and half the 80,000-square-foot office building is slated to be complete in mid-July, with the remaining offices and canteen area due to be complete in October.

The main building will feature a skylight system to make use of natural lighting for energy conservation and to create a pleasant work area. The new, enlarged canteen planned for the building will offer employees a panoramic view of the Scottish hills across the neighboring Clyde River. In addition, a fitness center is planned for the facility. The main electrical and air conditioning systems will be housed in a small central plant building, currently under construction.

The 260,000-square-foot office and manufacturing expansion will bring Erskine plant space to 490,000 square feet.

The expanded facility will permit increased production of desktop and portable computers and, over the next three years, could accommodate a Scottish workforce of more than 1,000 employees — double its current size.

Including the former Wang Laboratories facility in nearby Stirling, Scotland — purchased last year to house Compaq Scotland's service and repairs operations — Compaq Scotland's facilities will total 625,000 square feet of space.



Construction on expansion of the manufacturing facility in Erskine, Scotland, is about 20 percent complete, with employees scheduled to move in later this year.

Compaq Asia sponsors year-end 'Fanfare for Yishun'

Residents of Yishun, the Singapore community soon to be home to the new Compaq Asia manufacturing facility, knew something unusual was up when they received an invitation designed to look like a floppy disk.

Later, leaflets advertising "Fanfare for Yishun" were distributed to thousands of local residents. The leaflets, featuring photos of popular television stars and National University of Singapore performing groups, advised attendees to "Bring your cameras along!"

Certainly, "Fanfare for Yishun" offered many colorful sights. Presented by Compaq Asia PTE Ltd., the evening of entertainment provided something for everyone. The nearly four-hour musical show featured a campfire and singalong with student groups from Yishun schools as well as performances by the National University of Singapore (NUS) Symphonic Band, Jazz Dancers and Choir, and by several Singapore Broadcasting Corporation artists.

Planning for the event began last August, when Compaq representatives first met with representatives from the NUS music department and the chairperson of the Residents' Committee of Nee Soon East Zone 3 (Compaq Asia's new home).

Festivities were planned to coincide with the NUS Symphonic Band's 1989 tour of the Philippines, Macao and Hong Kong, and to commemorate the 25th anniversary of Singapore's independence, which occurs in 1990. Compaq Asia

underwrote much of the event, and provided design, production and distribution of invitations and publicity brochures.

According to Andrew Foo, Loss Prevention Officer and one of the many event coordinators, "The project's objectives were to involve the residents of Yishun and create an awareness of Compaq in

the minds of university students and Yishun residents."

Special guests at the celebration included Members of Parliament, Sembawang GRC, Charles Chong and K. Shanmugam, who were greeted at the site by Lion Dancers. Together with Lim Soon Hock, Managing Director

of Compaq Computer Asia, they lit a ceremonial campfire to initiate the festivities.

"Fanfare for Yishun" was so well-received, even a rainstorm that began at 10:15 p.m. couldn't dampen the spirits of the 3,000 Yishun residents and their families attending the gala.



Prancing lions greeted Compaq Computer Asia Managing Director Lim Soon Hock, left, and special guests Betty Lai, Nee Soon Zone 3 Residents' Committee Chairperson, and Charles Chong, Member of Parliament and guest of honor.

international FOCUS



Compaq Spain cultivates a series of successes

Although Compaq Spain S.A. is less than 2½ years old, it already has an established history of success to its credit. Much of that success can be attributed to the spirit of the company's Spanish employees who have achieved the subsidiary's objectives in record time.

Among its first objectives was the development of a highly qualified dealer network capable of providing the best solutions to end-users.

The subsidiary works closely with its Authorized Dealers, providing them with the sales and technical training needed to offer end-users the best service and support.

Besides holding frequent meetings with its dealers, the Sales and Marketing divisions of Compaq Spain send personalized mailings to keep the network constantly informed of such market innovations as CAD/CAE, UNIX and other operating systems. This regular contact also helps keep the Spanish subsidiary informed of end-users' needs and dealer concerns.

As a result of all these efforts, Spain's Authorized Dealers are well-versed in COMPAQ products and philosophy.

Connectivity seminars

Compaq Spain employees have discovered that planned major events offer the best opportunities for communicating



At the October announcement, Noel Goicoechea, Market Research (left), is encouraged to use a slightly unconventional method of extracting information about what the Spanish market demands from a notebook-sized laptop computer by Spanish magician Tamariz.

directly with their Authorized Dealers. A few such events have highlighted the company's growth in this competitive marketplace.

In June of 1989, Compaq Spain teamed up with the Association for

Progress of Management (APD), a non-profit private association of companies representing a cross-section of industry in Spain, to sponsor a conference on connectivity — LAN89.

This professional day on connectivity attracted 320 business people (including about 20 journalists) interested in listening to computer industry specialists discuss various methods by which business people share data among minicomputers, mainframes and microcomputer networks. Only 100 people had been expected to attend the seminar.

Compaq Spain and APD cooperatively staged LAN89 to acquaint members of the local business community with recent developments in connectivity and local area networks — issues of great interest to Spanish companies and to firms worldwide. The conference also offered Compaq the opportunity to alert Spanish companies to the role Compaq and its personal computers can play in developing communication networks, and in offering guidance on connectivity.

Representatives from Compaq, network systems software company Novell, Inc., and the accounting firm of Arthur Andersen joined Luis Carrera, Managing Director of Compaq Computer, S.A., in the presentation.

By cooperating in the development of this seminar, Compaq Spain increased brand awareness of COMPAQ personal computers in Spain and expanded the number of business people interested in the company and its products.

Based on the success of this seminar, Compaq Spain sponsored two additional one-day programs under the logo LAN89 last fall — seminars on connectivity and EISA. The LAN89 project culminated with a specialized trade fair in September.

The LAN89 project also led to the formation of ASLAN (LAN Association), an organization dedicated to the promotion and development of connectivity and local area networks in Spain. Among the companies joining Compaq in the organization were Apple, Microsoft and Novell. Compaq Spain Managing Director Luis Carrera was named president of ASLAN for its first year.

The Magic of LTE

On Oct. 16, Compaq Spain again impressed its Authorized Dealers, members of the press and other observers with its announcement event for the COMPAQ LTE/286 and COMPAQ LTE.

To introduce the laptops, the subsidiary engaged a noted Spanish magician, Tamariz, who amused and amazed the audience. Dealers, journalists and other observers agreed that even the magician's illusions couldn't compare to the speed, power and performance of these new notebook-sized personal computers.



At the announcement event, three sales representatives from Caliban, one of the first Authorized Dealers in Spain, immediately put the functional notebook computers to the test.

COUNTRY PROFILE

Country:	Spain
Head of State:	King Juan Carlos I
Prime Minister:	Felipe Gonzalez
Population:	38 million
Language spoken:	Spanish

SUBSIDIARY PROFILE

Name:	Compaq Computer, S.A.
Head office:	Rosario Pino, 14-16 pta 13 28020 Madrid
Telephone:	(91) 571-47-22
Established:	June 1987
Number of employees:	32
Number of dealers:	50 dealers and 80 POS



From left to right: Juan C. Perez (Warehouse), Carmen Galvez (receptionist), Jorge Esteban (Order Processing), Jesus Del Rio (Warehouse), Miguel Angel Tevar (Warehouse), and Victoria Moreno (MIS) agree that the long hours spent preparing for this announcement event were worthwhile.



BULL HELD CAPTIVE

Employees in the Sales Communication/Requirements group in Houston are hoping for the return of their "mascot," a small golden statue of a bull. This bull was kidnapped in January and all ransom demands have been met. The bull was received by a group member in a white elephant gift exchange, and is used as a "reward" for the person who arrives last at the group's weekly meetings. This is the second time the bull has been kidnapped. This time, ransom demands have included hanging a banner in the hall and writing 200-word essays on why group members want their bull back. "It has to be someone in our department. We don't have any leads, but they're the only ones who know what the bull means to us," says Linda Parsons. Pictured, from left, are Jay Thacker, Donna Faberty, Kay Gibson, Parsons and Scott Holyoak.

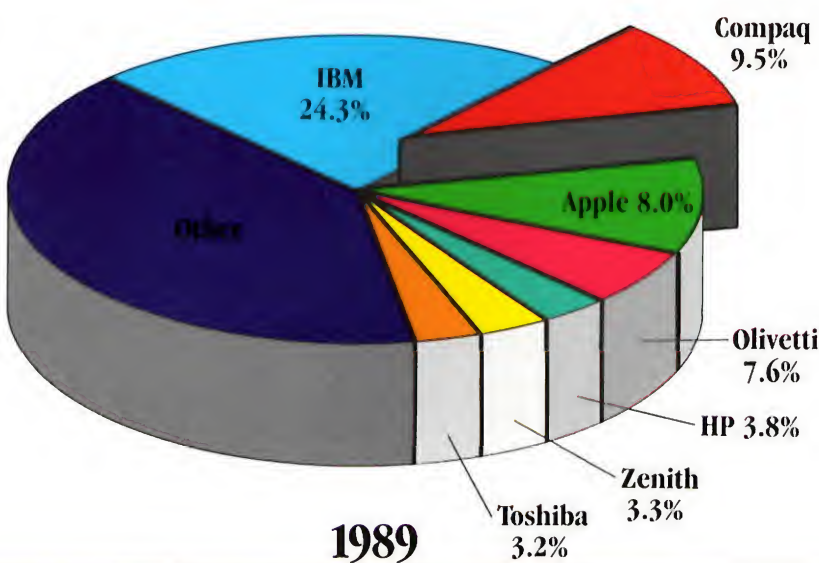
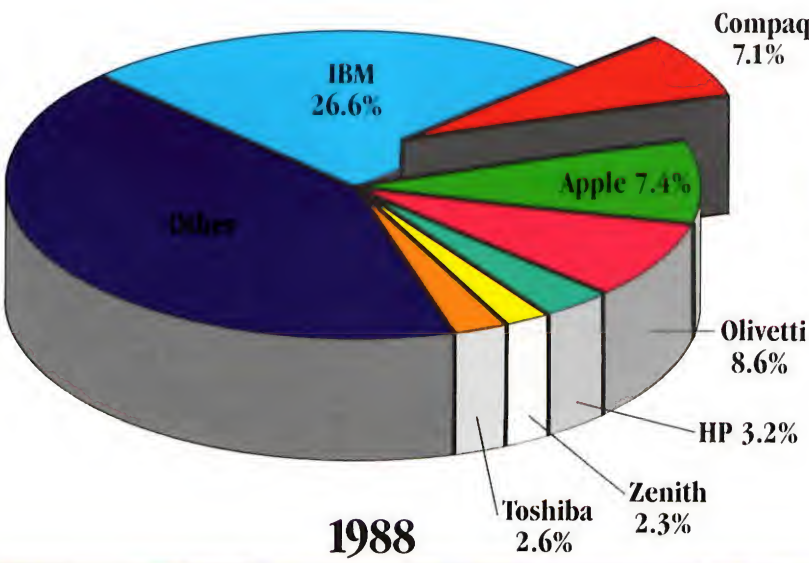
MUSICAL ENCOURAGEMENT

The Compaq Chorus was on hand during the Houston-Tenneco Marathon, an annual Houston event held each January, to give encouragement to the many runners. As participants ran by, the group sang and cheered them on toward the finish line. Pictured are, from left, David Nace, Wendy Harrison, Danette Burleigh, Becky Rogers, Harry Rogers, Chris Schuneman, Julia Rich, Mick Everett, Liz Gullion, Betty Everett, Karen Rasso, Steve Burleigh and Alice Tanner.



Compaq Europe & International

1988/1989 European Market Share (Value)



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